LISTING OF CLAIMS

1-14 (Cancelled).

15. (Previously Presented) A chimeric fusion protein comprising a bacteriorhodopsin protein amino acid sequence comprising substantially all of the amino acid sequence of bacteriorhodopsin, wherein at least a portion of the intracellular loop 3 domain of bacteriorhodopsin is replaced by at least a portion of the intracellular loop 3 domain of bovine rhodopsin, the chimeric protein having the ability to promote *in vitro* GTP-GDP exchange on transducin.

16. (Previously Presented) The chimeric protein of claim 15, wherein the intracellular loop 3 domain region corresponding to amino acid residues 171-179 of SEQ ID NO:2 is replaced with at least a portion of the intracellular loop 3 domain of bovine rhodopsin.

17. (Previously Presented) The chimeric protein of claim 16, wherein amino acid residues 171-179 of SEQ ID NO:2 are replaced with Y223-M253, Y223-R252, or Q225-R252 of bovine rhodopsin.

18. (Previously Presented) A polynucleotide sequence encoding the chimeric fusion protein of claim 17.

19. (Previously Presented) The polynucleotide sequence of claim 18 operably linked to a promoter.

20. (Previously Presented) An archaebacterium comprising the polynucleotide sequence of claim 19.

21. (Previously Presented) A method of producing a bacteriorhodopsin/G protein-coupled receptor chimeric fusion protein comprising culturing the archaebacterium of claim 20 under suitable conditions and for a period of time sufficient to allow expression of the chimeric fusion protein.

22. (Previously Presented) A method of testing a molecule for its ability to interact with the intracellular loop 3 of a G protein-coupled receptor comprising:

(a) contacting the chimeric fusion protein of claim 15 with the test molecule; and

(b) detecting the presence or absence of interaction between the protein and the test molecule of step (a).

23. (Previously Presented) The method of claim 22 wherein the detecting step (b) comprises performing an *in vitro* GTP-GDP exchange assay.